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FOREST RESEARCH NOTES

NORTHEASTERN FOREST EXPERIMENT STATION

Upper Darby, Pennsylvania



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ROCKY MOUNTAIN

No. 84
1958

PENOBSCOT WOODLANDS YIELD ANNUAL CUTS

Two small woodlands, put under management at the Penobscot Experimental Forest in the early 1950's, have yielded continuous annual cuts. The two woodlands, in the spruce-fir type, were selected to be representative of small forest properties in that region.

One, a moderately stocked woodland of 47 acres (Compartment 2) has been given light improvement cuts annually since 1951. The first three cuts brought gross incomes of \$624, \$192, and \$295. The other, a well-stocked woodland of 55 acres (Compartment 7), yielded \$557, \$183, and \$528 from cuts made in 1952-54.

These early cuttings were described in Forest Research Notes 21 (1953) and 61 (1956). This report summarizes results of the subsequent cuttings.

Compartment 2

The fourth cutting, made in 1954, removed 5-3/4 cords of peeled aspen (popple) and red maple pulpwood. The work was done by a local resident who contracted to put the wood at roadside.

The fifth cutting removed 26 cords of pulpwood; about 5 cords of this was rough wood in balsam fir trees blown down in the hurricane September 11, 1954. The remainder was peeled wood from poorly formed red maple, aspen, and low-vigor balsam fir. The maple and aspen trees were girdled at the base and brush-treated with sodium arsenite in June 1954 for chemical debarking.

The sixth cutting removed 17 cords of pulpwood, 48 cedar posts, and 1,250 board-feet of sawlogs. Poorly formed red maple, mature aspen and cedar, and blister-rust-infected white pine were cut. The cut was made during the winter by contractors. All wood was sold in rough form except the winter-cut aspen, which was peeled in the spring.

Compartment 7

On Compartment 7, the fourth cut (1955) took 55½ cords of hemlock, red maple, aspen, spruce, and fir pulpwood. All trees except balsam fir were girdled at the base and brush-treated with sodium arsenite in June 1954 for chemical debarking. The fifth cut on this woodlot removed 54½ cords of rough pulpwood, 136 posts, and nearly 7,500 board-feet of sawlogs. Except for some good hemlock taken to thin out dense clumps, only the poor trees were cut. The work was done by contractors on a cord basis.

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Methods & Results

One man did the felling with a chain saw during the fourth cut on Compartment 2. The other cuttings were made by 2- or 3-man crews using 1-man chain saws. The felled trees were skidded in tree or log lengths to bucking yards where the cordwood and posts were cut up with a chain saw and piled at roadside. The logs were decked on skids. A horse was used for skidding the fourth cut in Compartment 2. A small gasoline crawler tractor with winch and logging sulky was used in the 1955 cuttings on both compartments. Both horse and tractor were used to skid the 1956 cuts on both compartments.

Table 1.--Outlays and returns from five improvement cuttings
on small Penobscot woodlands

Item	Cutting on Compartment 2			Cutting on Compartment 7	
	4th (1954)	5th (1955)	6th (1956)	4th (1955)	5th (1956)
OUTLAYS					
Debarking.....man-hours..	--	57.0	--	134.0	--
Felling and limbing..man-hours..	24.0	218.0	120.5	316.0	159.0
Skidding.....man-hours..	3.0	154.5	54.0	241.0	142.0
tractor-hours..	--	76.5	11.0	138.0	8.5
horse-hours..	3.0	--	32.0	--	125.0
Bucking and piling...man-hours..	6.0	96.5	30.0	173.0	69.0
Total outlay.....man-hours..	33.0	526.0	204.5	864.0	370.0
tractor-hours..	--	76.5	11.0	138.0	8.5
horse-hours..	3.0	--	32.0	--	125.0
RECEIPTS					
Amount sold.....cords..	5.75	26.06	17.02	54.66	54.50
M. bd.ft.:	--	--	1.263	--	7.431
posts..	--	--	48	--	136
Average roadside price					
per cord.....dollars..	14.35	16.05	14.65	17.18	12.73
per M bd.ft.....dollars..	--	--	35.00	--	30.61
per post.....dollars..	--	--	0.605	--	0.508
Total sale value.....dollars..	\$82.51	\$418.26	\$322.24	\$939.06	\$990.33

*Bangor rule.

Table 1 shows the direct outlays and receipts from these five cuttings, assuming the wood was sold at the roadside. If the woodland owners had used their own labor, tractor, horses, and chain saws, the only added cash outlays would have been for gasoline, oil, and repairs. These costs have averaged \$0.90 per hour for the tractor, and \$0.71 per cord or thousand board-feet for the chain saw used on the Experimental Forest. On this basis, the owners' cash income from their woodlands would have been \$78, \$331, \$299, \$776, and \$937 for the five cuttings in the order listed in table 1.

--A. C. HART, Research Forester

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